



# WINTER WHEAT VARIETIES for ILLINOIS

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## Based on Yields for 1943-1947

THIS CIRCULAR presents the results obtained from wheat variety trials in northern, central, and southern Illinois. The following information is shown in the tables:

1. Amount each variety yielded above or below the average of all varieties grown the same years
2. Average yield per acre — all years and in 1947
3. Test weight per bushel
4. Percentage of plants erect at harvest, and height of plants
5. Whether variety is hard or soft, bearded or smooth
6. Susceptibility to the mosaic disease (see footnotes)
7. Comparison with a standard variety — with Wisconsin 2 in northern Illinois, Pawnee in central Illinois, Fulcaster in southern Illinois

## Recommended Varieties

On the basis of these tests the following varieties are recommended for the different parts of the state:

### *Northern Illinois*

Hard wheats — Wisconsin 2, Pawnee, Marmin

Soft wheats — Blackhawk, Prairie

### *Central Illinois*

Hard wheats — Pawnee, Comanche, Brill

Soft wheats — Prairie, Royal, Vigo

### *Southern Illinois*

Soft wheats — Royal, Newcaster, Fulcaster, Vigo, Blackhawk

(Hard wheats are not recommended for southern Illinois.)

Table 1.—NORTHERN ILLINOIS (Mt. Morris): Performance of Winter Wheat Varieties Grown in 1947

Rank	Variety	Above (+) or below (—) average of all varieties	Yield per acre		Test weight per bushel	Plants erect at harvest <sup>a</sup>	Height of plants <sup>a</sup>	Class	Bearded or smooth
			All years	1947					
Varieties grown five years: 1943-1947									
		<i>bu.</i>	<i>bu.</i>	<i>bu.</i>	<i>lb.</i>	<i>perct.</i>	<i>inches</i>		
1	Blackhawk.....	+3.1	40.3	53.6	59.4	87.7	48.7	Soft	Bearded
2	Prairie.....	+1.5	38.7	56.9	57.9	91.3	46.1	Soft	Bearded
3	Illinois 37-1146-3.....	+1.2	38.4	46.9	58.9	91.3	46.4	Hard	Bearded
4	Wisconsin 2.....	+1.1	38.3	52.2	58.5	78.9	48.4	Hard	Bearded
5	Turkey.....	+ .6	37.8	51.8	58.9	77.3	47.1	Hard	Bearded
6	Pawnee.....	— .2	37.0	49.7	57.8	91.8	39.2	Hard	Bearded
7	Marmin.....	— .7	36.5	44.8	58.8	88.8	46.3	Hard	Bearded
8	Clarkan.....	—2.0	35.2	47.9	58.9	90.0	48.1	Soft	Smooth
9	Brill.....	—2.4	34.8	47.4	58.1	78.3	46.4	Hard	Bearded
10	Comanche.....	—3.8	33.4	42.6	55.3	82.2	41.9	Hard	Bearded
	Difference necessary for significance.....		2.2	7.1	....	....	....	....	....
Varieties grown three years: 1945-1947									
1	Illinois 40-679.....	+3.9	47.5	58.1	60.7	94.0	50.0	Soft	Bearded
2	Newcaster.....	+1.5	45.1	48.8	60.9	83.3	51.0	Soft	Bearded
3	Kawvale.....	+1.0	44.6	49.8	59.4	86.3	46.0	Soft	Bearded
4	Illinois 40-1205.....	0	43.6	50.3	61.6	91.3	51.7	Soft	Bearded
4	Royal (Ill. D-85).....	0	43.6	50.8	62.1	86.7	49.0	Soft	Bearded
6	Wisconsin 2.....	— .1	43.5	52.2	60.5	76.3	51.0	Hard	Bearded
	Difference necessary for significance.....		3.5	7.1	....	....	....	....	....
Varieties grown two years: 1946-1947									
1	Fairfield.....	+2.9	42.2	56.8	58.8	96.5	44.5	Soft	Smooth
2	Wisconsin 2.....	+2.8	42.1	52.2	60.5	91.0	48.0	Hard	Bearded
3	Illinois 43-254.....	— .4	38.9	48.6	61.3	97.5	48.0	Soft	Bearded
4	Vigo.....	—1.2	38.1	50.4	59.7	96.0	46.5	Soft	Smooth
5	Fulcaster.....	—1.7	37.6	46.2	60.6	94.5	45.5	Soft	Bearded
6	Cache.....	—3.9	35.4	41.4	58.7	92.0	43.0	Hard	Smooth
7	Wasatch.....	—4.7	34.6	45.5	59.8	96.0	46.5	Hard	Bearded
	Difference necessary for significance.....		4.6	7.1	....	....	....	....	....
Varieties grown in 1947 only									
1	Wisconsin 2.....	+2.7	52.2	52.2	59.0	92.0	54.0	Hard	Bearded
2	Westar.....	+2.5	52.0	52.0	57.0	94.0	51.0	Hard	Bearded
3	Wichita.....	+1.3	50.8	50.8	58.9	89.0	49.0	Hard	Bearded
4	Goens.....	—5.6	43.9	43.9	59.8	91.0	53.0	Soft	Bearded
	Difference necessary for significance.....		7.1	7.1	....	....	....	....	....

<sup>a</sup> In the first section of this table the figures for erect plants and height of plants are an average of only four years (1944-1947) instead of five years.

Table 2. — CENTRAL ILLINOIS (Urbana): Performance of Winter Wheat Varieties Grown in 1947

Rank	Variety	Above (+) or below (—) average of all varieties	Yield per acre		Test weight per bushel	Plants erect at harvest	Height of plants	Class	Bearded or smooth
			All years	1947					
Varieties grown five years: 1943-1947									
		<i>bu.</i>	<i>bu.</i>	<i>bu.</i>	<i>lb.</i>	<i>perct.</i>	<i>inches</i>		
1	Pawnee*	+3.8	41.3	43.5	58.8	56.0	42.8	Hard	Bearded
2	Blackhawk**	+2.8	40.3	45.8	59.6	66.0	50.0	Soft	Bearded
3	Prairie	+2.4	39.9	50.9	57.4	84.9	49.2	Soft	Bearded
4	Fairfield	+ .4	37.9	43.3	56.9	78.3	49.2	Soft	Smooth
5	Comanche*	— .4	37.1	40.8	56.8	47.0	44.0	Hard	Bearded
6	Clarkan**	— .5	37.0	42.6	60.0	75.8	49.8	Soft	Smooth
6	Brill*	— .5	37.0	42.4	58.9	53.4	49.4	Hard	Bearded
8	Fulcaster	—1.1	36.4	42.0	58.7	47.4	48.4	Soft	Bearded
9	Marmin*	—1.2	36.3	42.9	58.9	60.8	47.8	Hard	Bearded
10	Goens	—1.3	36.2	42.9	59.6	70.9	48.0	Soft	Bearded
11	Illinois 37-1146-3	—1.5	36.0	41.4	59.0	59.8	47.2	Hard	Bearded
12	Turkey*	—2.7	34.8	41.1	58.2	40.7	45.8	Hard	Bearded
13	Wisconsin 2*	—2.8	34.7	38.2	58.2	54.2	46.2	Hard	Bearded
Difference necessary for significance			1.4	3.5	....	....	....	....	....
Varieties grown four years: 1944-1947									
1	Pawnee*	+4.0	41.9	43.5	59.3	58.0	43.3	Hard	Bearded
2	Royal (Ill. D-85)	+3.1	41.0	47.4	61.4	70.0	49.0	Soft	Bearded
3	Vigo	+ .7	38.6	44.9	58.0	82.5	52.0	Soft	Smooth
4	Kawvale*	+ .6	38.5	41.6	56.8	56.3	47.8	Soft	Bearded
Difference necessary for significance			1.7	3.5	....	....	....	....	....
Varieties grown three years: 1945-1947									
1	Illinois 40-679	+7.0	45.7	55.6	59.3	76.8	54.7	Soft	Bearded
2	Pawnee*	+4.7	43.4	43.5	59.1	45.9	45.0	Hard	Bearded
3	Illinois 40-1205	+1.0	39.7	44.6	61.5	67.1	52.3	Soft	Bearded
4	Newcaster	—2.3	36.4	40.6	58.1	37.5	49.3	Soft	Bearded
5	Cache*	—7.2	31.5	34.0	55.0	31.3	47.3	Hard	Smooth
Difference necessary for significance			2.1	3.5	....	....	....	....	....
Varieties grown two years: 1946-1947									
1	Illinois 43-254	+6.9	47.5	48.9	61.6	64.3	55.0	Soft	Bearded
2	Pawnee*	+3.6	44.2	43.5	58.7	33.9	45.0	Hard	Bearded
3	Westar	+3.1	43.7	40.0	55.8	39.6	47.0	Hard	Bearded
4	Wasatch**	—5.0	35.6	37.6	57.6	39.4	47.5	Hard	Bearded
Difference necessary for significance			2.5	3.5	....	....	....	....	....
Varieties grown in 1947 only									
1	Wichita*	+ .9	44.1	44.1	56.8	46.2	42.0	Hard	Bearded
2	Pawnee*	+ .3	43.5	43.5	55.9	23.8	42.0	Hard	Bearded
Difference necessary for significance			3.5	3.5	....	....	....	....	....

\* Moderately susceptible to wheat mosaic disease. \*\* Very susceptible to wheat mosaic disease.

**Table 3.—SOUTHERN ILLINOIS (Alhambra): Performance of  
Winter Wheat Varieties Grown in 1947**

Rank	Variety	Above (+) or below (—) average of all varieties	Yield per acre		Test weight per bushel	Plants erect at harvest <sup>a</sup>	Height of plants <sup>a</sup>	Class	Bearded or smooth
			All years	1947					
Varieties grown five years: 1943-1947									
		<i>bu.</i>	<i>bu.</i>	<i>bu.</i>	<i>lb.</i>	<i>perct.</i>	<i>inches</i>		
1	Fulcaster	+1.6	18.7	21.7	57.7	77.2	45.1	Soft	Bearded
2	Royal (Ill. D-85)	+1.3	18.4	20.6	58.7	81.2	42.9	Soft	Bearded
3	Blackhawk**	+1.1	18.2	19.4	57.7	84.3	45.8	Soft	Bearded
4	Fairfield	+ .9	18.0	22.4	55.6	86.7	45.2	Soft	Smooth
5	Trumbull	— .1	17.0	21.3	55.4	80.3	43.8	Soft	Smooth
6	Goens	— .5	16.6	18.1	57.8	82.6	43.6	Soft	Bearded
7	Prairie	— .9	16.2	20.9	56.9	86.9	43.3	Soft	Bearded
8	Clarkan**	—1.5	15.6	18.7	58.3	83.6	44.6	Soft	Smooth
	Difference necessary for significance	.....	1.6	3.4	....	....	....	....	.....
Varieties grown three out of last four years <sup>b</sup>									
1	Newcaster	+3.6	22.3	21.8	58.1	67.9	44.7	Soft	Bearded
2	Illinois 40-679	+ .8	16.4	23.4	56.4	80.5	45.4	Soft	Bearded
3	Fulcaster	+ .6	19.3	21.7	57.8	72.2	44.8	Soft	Bearded
4	Vigo	+ .5	19.2	21.7	56.9	79.2	45.6	Soft	Smooth
5	Illinois 40-1205	—2.2	13.5	18.5	58.0	81.4	43.7	Soft	Bearded
6	Fulhio	—2.4	16.3	20.0	56.4	78.5	44.0	Soft	Smooth
Varieties grown two years: 1946-1947									
1	Indiana Red Wave	+ .8	15.9	22.0	55.5	79.8	42.0	Soft	Smooth
2	Fulcaster	+ .3	15.4	21.7	57.3	59.2	43.8	Soft	Bearded
	Difference necessary for significance	.....	2.8	3.4	....	....	....	....	.....
Varieties grown in 1947 only									
1	Clark 40-169R	+1.1	21.8	21.8	61.8	90.0	41.8	Soft	Smooth
2	Fulcaster	+1.0	21.7	21.7	59.2	78.3	39.6	Soft	Bearded
3	Illinois 43-254	— .2	20.5	20.5	59.6	80.0	44.5	Soft	Bearded
	Difference necessary for significance	.....	3.4	3.4	....	....	....	....	.....

\* Moderately susceptible to wheat mosaic disease. \*\* Very susceptible to wheat mosaic disease.

<sup>a</sup> In the first section of this table the figures for erect plants and height of plants are an average of only four years (1944-1947) instead of five years.

<sup>b</sup> Difference necessary for significance is not given because varieties were not all grown the same years.